

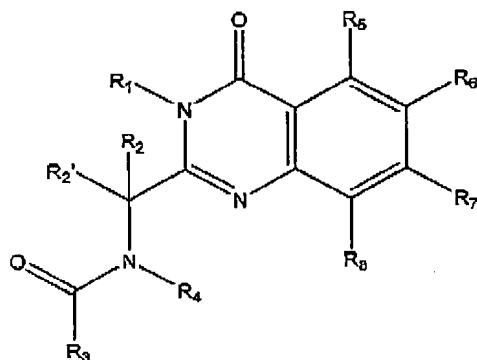
U.S. Application No. 09/724,778  
Attorney Docket Number 09367.0018-06000  
(formerly CYTOP00901)

**In the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-17. (Cancelled)

18. (Previously Presented) A method of treating cancer comprising administering a therapeutically effective dose of a compound having the structure of:



wherein

R<sub>1</sub> is benzyl or halobenzyl;

R<sub>2</sub> is chosen from ethyl and propyl;

R<sub>2</sub>' is hydrogen;

R<sub>3</sub> is substituted phenyl;

R<sub>4</sub> is (CH<sub>2</sub>)<sub>m</sub> OH or (CH<sub>2</sub>)<sub>p</sub> R<sub>16</sub> wherein m is 2 or 3 and p is 1-3;

R<sub>5</sub> is hydrogen;

R<sub>6</sub> is hydrogen;

R<sub>7</sub> is halo;

R<sub>8</sub> is hydrogen;

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$R_{16}$  is chosen from amino, propylamino, and azetidiny1;  
or a pharmaceutically acceptable salt of any of the foregoing compounds,  
wherein said therapeutically effective dose is an amount effective to inhibit KSP.

19. (Original) A method according to claim 18 wherein the stereogenic center to which  $R_2$  and  $R_{2'}$  are attached is of the R configuration.

20-64. (Cancelled)

65. (Previously presented) The method of claim 18, wherein

$R_1$  is benzyl;

$R_2$  is isopropyl;

$R_{2'}$  is hydrogen;

$R_3$  is p-tolyl;

$R_4$  is 3-aminopropyl;

$R_5$  is hydrogen;

$R_6$  is hydrogen;

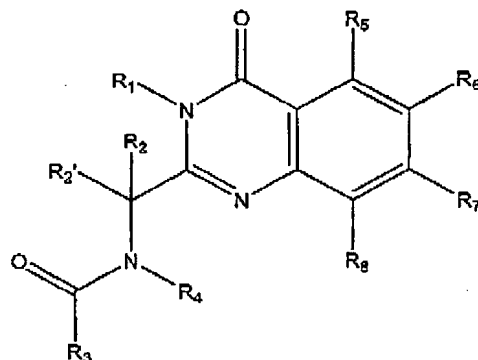
$R_7$  is chloro; and

$R_8$  is hydrogen.

66. (Cancelled)

67. (Previously Presented) A method of treating cancer comprising administering a therapeutically effective dose of a compound having the structure of:

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wherein

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-(isopropylamino)propyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is p-chlorobenzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-(dimethylamino)propyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>,  
and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is m-methoxybenzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-aminopropyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is isopropyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>,  
R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is azetidin-3-ylmethyl; R<sub>5</sub>,  
R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-aminoethyl; R<sub>5</sub>, R<sub>6</sub>, and  
R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-aminoethyl; R<sub>5</sub>,  
R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

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R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(methylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-(methylamino)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(methylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is azetidin-2-ylmethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is methylsulfinylmethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is piperidin-3-ylmethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is fluoro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-aminoethyl; R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> are hydrogen;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is piperidin-2-yl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 4-aminobutyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is m-chlorobenzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

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R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(piperidin-1-yl)ethyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(imidazol-3-yl)ethyl; R<sub>5</sub>,  
R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is pyrrolidin-3-ylmethyl; R<sub>5</sub>,  
R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is  
2-(diethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(dimethylamino)ethyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-chlorophenyl; R<sub>4</sub> is  
2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 4-aminobutyl; R<sub>5</sub>, R<sub>6</sub>, and  
R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is pyrrolidin-2-ylmethyl; R<sub>5</sub>,  
R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-(azetidin-1-yl)propyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(pyrrolidin-1-yl)ethyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-(pyrrolidin-1-yl)propyl;  
R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-  
(dimethylamino)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is propyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-  
(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(pyrrolidin-1-  
yl)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-(pyrrolidin-1-  
yl)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

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R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is piperidin-4-ylmethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is methylsulfinylethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-(piperidin-1-yl)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is benzyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is (N-ethylpyrrolidin-2-yl)methyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-piperidinyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 4-piperidinyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is p-chlorobenzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2,2-dimethyl-3-(dimethylamino)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 5-aminopentyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-(dimethylamino)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is fluoro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-(2-methylpiperidin-1-yl)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is fluoro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(N-methylpyrrolidin-2-yl)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-trifluoromethylphenyl; R<sub>4</sub> is 3-(dimethylamino)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

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R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-(diethylamino)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 3-(N-methylpiperazin-1-yl)propyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is 4-(CBZ)aminobutyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is aminoethoxyethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is 2-naphthyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro

R<sub>1</sub> is benzyl; R<sub>2</sub> is cyclohexylmethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(piperidin-1-yl)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-hydroxypropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-fluorophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 6-aminoethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>7</sub>, and R<sub>8</sub> are hydrogen; and R<sub>6</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is fluoro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is methyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-aminoethyl; R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> are hydrogen;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are hydrogen; and R<sub>8</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> are hydrogen; and R<sub>5</sub> is chloro;

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R<sub>1</sub> is benzyl; R<sub>2</sub> is aminobutyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 3-aminopropyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-tolyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub> and R<sub>8</sub> are hydrogen; and R<sub>6</sub> and R<sub>7</sub> are fluoro;

R<sub>1</sub> is m-tolyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro;

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-(dimethylamino)ethyl; R<sub>5</sub> and R<sub>8</sub> are hydrogen; and R<sub>6</sub> and R<sub>7</sub> are fluoro; or

R<sub>1</sub> is benzyl; R<sub>2</sub> is ethyl; R<sub>2</sub>' is hydrogen; R<sub>3</sub> is p-bromophenyl; R<sub>4</sub> is 2-carboxyethyl; R<sub>5</sub>, R<sub>6</sub>, and R<sub>8</sub> are hydrogen; and R<sub>7</sub> is chloro,

or a pharmaceutically acceptable salt of any of the foregoing compounds,  
wherein said therapeutically effective dose is an amount effective to inhibit KSP.

68-75. (Cancelled)

76. (Previously Presented) The method of claim 18, wherein R<sub>3</sub> is phenyl substituted with one or more halo, lower alkyl, lower alkoxy, nitro, carboxy, methylenedioxy, or trifluoromethyl.

77-81. (Cancelled)

82. (Previously Presented) The method of claim 18, wherein said salt is a mesylate.

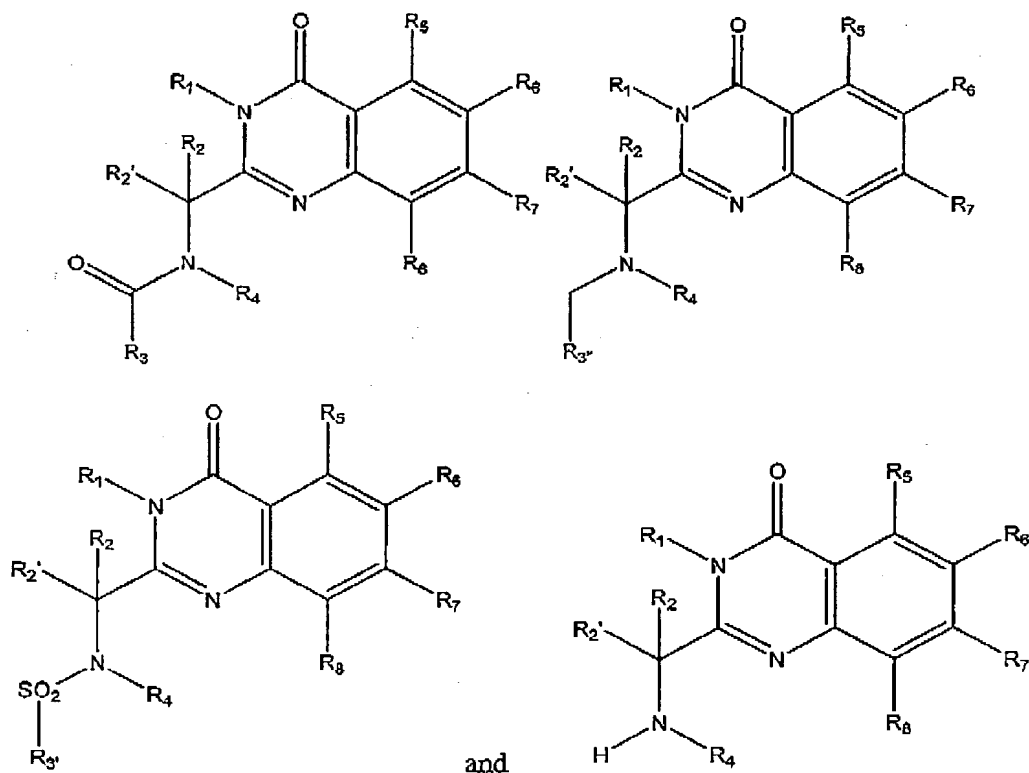
83. (Cancelled)

84. (Previously Presented) A method according to claim 67 wherein the stereogenic center to which R<sub>2</sub> and R<sub>2</sub>' are attached is of the R configuration.



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85. (New) A method of inhibiting mitosis in a cell comprising contacting the cell with a compound chosen from the group consisting of:



wherein:

R<sub>1</sub> is chosen from hydrogen, alkyl, aryl, alkylaryl, heteroaryl, alkylheteroaryl, substituted alkyl, substituted aryl, substituted alkylaryl, substituted heteroaryl, and substituted alkylheteroaryl;

R<sub>2</sub> and R<sub>2'</sub> are independently chosen from hydrogen, alkyl, and substituted alkyl;

R<sub>3</sub> is chosen from hydrogen, alkyl, aryl, alkylaryl, heteroaryl, alkylheteroaryl, substituted alkyl, substituted aryl, substituted alkylaryl, substituted heteroaryl, substituted alkylheteroaryl, and R<sub>15</sub>NH-

R<sub>3'</sub> is chosen from hydrogen, alkyl, aryl, alkylaryl, heteroaryl, alkylheteroaryl, substituted alkyl, substituted aryl, substituted alkylaryl, substituted heteroaryl, and substituted alkylheteroaryl;

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R<sub>3</sub> is chosen from alkyl, aryl, alkylaryl, heteroaryl, alkylheteroaryl, substituted alkyl, substituted aryl, substituted alkylaryl, substituted heteroaryl, and substituted alkylheteroaryl;

R<sub>4</sub> is chosen from hydrogen, alkyl, aryl, alkylaryl, heteroaryl, alkylheteroaryl, substituted alkyl, substituted aryl, substituted alkylaryl, substituted heteroaryl, and substituted alkylheteroaryl;

R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> are independently chosen from hydrogen, alkyl, alkoxy, halogen, fluoroalkyl, nitro, dialkylamino, alkylsulfonyl, alkylsulfonamido, sulfonamidoalkyl, sulfonamidoaryl, alkylthio, carboxyalkyl, carboxamido, aminocarbonyl, aryl and heteroaryl; and

R<sub>15</sub> is chosen from alkyl, aryl, alkylaryl, heteroaryl, alkylheteroaryl, substituted alkyl, substituted aryl, substituted alkylaryl, substituted heteroaryl, and substituted alkylheteroaryl.

86. (New) The method of claim 85 wherein R<sub>1</sub> is an optionally substituted aryl group.

87. (New) The method of claim 85 wherein R<sub>2</sub> is hydrogen and R<sub>2</sub> is hydrogen, lower alkyl or substituted lower alkyl.

88. (New) The method of claim 85 wherein R<sub>3</sub> is R<sub>15</sub>NH-.

89. (New) The method of claim 85 wherein R<sub>3</sub> is optionally substituted aryl.

90. (New) The method of claim 85 wherein R<sub>3</sub> is substituted phenyl.

91. (New) The method of claim 85 wherein R<sub>4</sub> is optionally substituted alkyl.